

WHAT IS CLAIMED IS:

1. A light source device, comprising:  
a light source lamp; and  
a reflector that reflects light emitted from the light source lamp,  
5 wherein the reflector is formed of a ceramic having a thermal conductivity of at least about 0.005 (cal/cm·sec·deg) at a temperature of 20°C.

2. A light source device in accordance with claim 1, wherein the ceramic has a thermal conductivity of at least about 0.004 (cal/cm·sec·deg) in a  
10 temperature range of about 0 to about 200°C.

*Sub  
a'*  
3. A light source device in accordance with claim 2, wherein the ceramic is composed of any material selected among the group consisting of  
15  $\text{Al}_2\text{O}_3$ ,  $2\text{MgO}\cdot\text{SiO}_2$ ,  $\text{MgO}\cdot\text{SiO}_2$ ,  $\text{ZrO}_2\cdot\text{SiO}_2$ ,  $\text{TiO}_2$  compounds,  $\text{SiC}$ ,  $\text{Si}_3\text{N}_4$ ,  $\text{ZrO}_2$ , and cermet.

4. A light source device in accordance with claim 1, further comprising:  
a transmissive front panel fitted in an opening of the reflector.

20 5. A light source device in accordance with claim 1, further comprising:  
a cooling device that forcibly cools down the reflector.

6. A light source device in accordance with claim 1, further comprising:  
a power source that activates the light source lamp.

7. A projector, comprising:

an illuminating optical system including a light source device;

an electrooptic device that modulates light emitted from the illuminating optical system in response to image information; and

5 a projection optical system that projects a modulated light obtained by the electrooptic device,

the light source device comprising:

a light source lamp; and

a reflector that reflects light emitted from the light source lamp,

10 wherein the reflector is formed of a ceramic having a thermal conductivity of at least about 0.005 (cal/cm·sec·deg) at a temperature of 20°C.

8. A projector in accordance with claim 7, wherein the ceramic has a

thermal conductivity of at least about 0.004 (cal/cm·sec·deg) in a temperature

15 range of about 0 to about 200°C.

*sub A2*  
9. A projector in accordance with claim 8, wherein the ceramic is composed of any material selected among the group consisting of  $\text{Al}_2\text{O}_3$ ,  $2\text{MgO}\cdot\text{SiO}_2$ ,  $\text{MgO}\cdot\text{SiO}_2$ ,  $\text{ZrO}_2\cdot\text{SiO}_2$ ,  $\text{TiO}_2$  compounds,  $\text{SiC}$ ,  $\text{Si}_3\text{N}_4$ ,  $\text{ZrO}_2$ , and

20 cermet.

10. A projector in accordance with claim 7, further comprising:

a transmissive front panel fitted in an opening of the reflector.

25 11. A projector in accordance with claim 7, further comprising:

a cooling device that forcibly cools down the reflector.

12. A projector in accordance with claim 7, further comprising:

a power source that activates the light source lamp.

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13. A projector in accordance with claim 7, further comprising:

a driving section that supplies the image information to drive the electrooptic device.

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